EPA Docket Number: OW-2003-0063

Comments of Susan S. Pitman, Network Coordinator, The Chemical Connection, A Public Health Network of Texans Sensitive to Chemicals, PO Box 26152, Austin, TX 78755-0152

In opposition to adoption of "Interium Statement and Guidance on Application of Pesticides to Waters of the United States in Compliance with FIFRA"

September 14, 2003

INTRODUCTION

Application of pesticides, including aquatic herbicides intended to kill unwanted aquatic vegetation and aquatic insecticides intended to kill mosquito larvae should be regulated under the Clean Water Act in addition to FIFRA, contrary to what the EPA "Interim Statement and Guidance on Application of Pesticides to Waters of the United States in Compliance with FIFRA" proposes. Likewise, aerial applications of pesticides applied to a forest canopy where waters of the United States may be present below the canopy or when insecticides are applied over water for control of adult mosquitoes should be subject to the Clean Water act as well as FIFRA. Simply being allowed to apply pesticides under FIFRA DOES NOT adequately protect water quality.

FIFRA is a licensing law that allows pesticides ("economic poisons") to be sold so long as they are used in a fashion described by label requirements, with the intent that such requirements will protect users and the environment from unreasonable adverse effects. This narrow abstract view is totally inadequate to protect water quality. There must be real-time evaluation of each application (use) in or near public waters, including all the particular variables involved (including potential multiple legal applications by different parties), to assure the high quality of water demanded by human health and the health of the eco-system upon which we all rely. Applications of pesticides in or near water should be subject to NPDES permitting requirements to assure that they will not result in changes in the chemistry of the water or changes in non-target aquatic life. FIFRA protects the right of manufacturers to sell their products; the Clean Water Act protects water quality for all United States citizens and the ecosystem that supports their life and health. Both are necessary.

The very existence of people like me who have experienced severe health problems from applications of pesticides considered legal under FIFRA, illustrates the inadequacy of the the FIFRA approach to protect health and the environment, including water quality.

FIFRA NOT DESIGNED TO PROTECT WATER QUALITY

FIFRA by itself does not work to protect human health and the environment, especially with the lack of adequate resources given to EPA over the years since its inception. "EPA cannot provide the public with assurance that the precautionary statements on many pesticide labels are adequate to protect humans and the environment from unreasonable adverse effects," concludes the Executive Summary of the EPA Inspector General Audit, "Labeling of Pesticides," Report No. E1EPF1-05-042902100613. The report goes on to say "The Office of Pesticide Program's (OPP) process for reviewing and accepting pesticide labels did not include verifying that toxicity

studies existed prior to accepting pesticide labels. In many cases, the toxicity studies would not have been available even if OPP had attempted to use them. Due to certain provisions of FIFRA, pesticides were registered without requiring a complete set of toxicity studies… The precautionary statements on many pesticide labels may not be adequate to protect the user and the environment. Almost half the pesticide labels evaluated had missing or inaccurate precautionary statements…"

EPA registration of pesticides is based on a limited number of tests which do not adequately reflect the complexity of either the human body or the eco-system. The testing protocol was developed before science fully described the human immune and/or hormonal system, so interruption of these and other as yet to be discovered communication systems in the body were not considered before pesticide products were licensed ("approved"). (The knowledge base for these and other aspects of human health to which FIFRA is not designed to respond is growing even today.) FIFRA also does not respond to the new scientific world view (as expressed by the eminent geneticist Dr. David Suzuki) "the inclusive vision of nature in which human beings are intimately connected to all life processes on earth … we are completely dependent on the planet's life support system." (PBS.org's introduction to its series The Sacred Balance.) EPA approval of pesticides under FIFRA is based on a guess (that was made on the basis of incomplete information) that use of the pesticide would not result in "unreasonable adverse effects - guesses that were made at the time the products were registered, often many years ago.

Under the FIFRA scheme, the "guess" that use according to the label would not result in unreasonable adverse effects was to be supplemented with information on the actual effects as pesticides were in actual use. The EPA set up a system of requiring incident reports to get this information. There has been much criticism about the difficulties involved in obtaining incident reports, including many instances where the manufacturers have not forwarded to EPA the reports which they received. In any case, EPA does have a small data base of incident reports. The EPA Audit mentioned above, "Labeling of Pesticides" concludes the following: "OPP placed little importance on the information in incident reports that it received. However, the incident reports contained important information on the consequences of pesticide use. Incident reports include information on human and animal deaths and adverse reactions to pesticides. OPP was not analyzing the incident reports to identify additional restrictions which may be needed to protect users and the environment from adverse effects of pesticides."

FIFRA RELIES ON TESTS OF ACTIVE INGREDIENTS ALONE, NOT OTHER INGREDIENTS IN THE PESTICIDE FORMULATION AS APPLIED THAT CAN BE MORE TOXIC TO PEOPLE AND/OR THE ECOSYSTEM THAN THE ACTIVE INGREDIENT.

Many of the ingredients of pesticide formulations are not even disclosed because they are "trade secrets" protected under FIFRA.

FIFRA RELIES ON TESTS OF ACTIVE INGREDIENTS ALONE WITHOUT CONSIDERATION OF POTENTIAL ADDITIVE OR SYNERGISTIC EFFECTS WITH OTHER SUBSTANCES IN THE AQUATIC ENVIRONMENT.

FIFRA RELIES ON TESTS OF DIRECT EFFECTS OF EACH PESTICIDE, NOT CONSIDERING RIPPLE EFFECTS TO THE ECO-SYSTEM AND WATER QUALITY.

Ripple effects of organophospate pesticides (often used for mosquito control) were documented in:

> Hurlbert, S.H., M. S. Multa, and H. R. Wilson, 1972. "Effects of an oranophosphours insecticide on the phytoplankton, zooplankton, and insect populations of fresh-water ponds." *Ecol. Monogr. 42:269-299*

Beyond the direct toxic effects, this study showed that the application resulted in a reduction of insect and plant killing insects and crustaceans which resulted in an increase in phytoplankton which resulted in an algae bloom, which resulted in wildlife and livestock illness from drinking water affected by algae bloom.

BY REGULATING THE PESTICIDE, NOT WATER QUALITY, FIFRA FAILS TO TAKE INTO ACCOUNT MULTIPLE APPLICATIONS IN THE SAME BODY OF WATER.

In 1996 a supposedly legal aquatic herbicide application was made to Lake McQueeney in Seguin, TX. The following letter to then Governor Bush describes what happened:

> April 22, 1998
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> Dear Governor Bush:
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> As you are aware, there is a great deal of public opposition to the contamination of public drinking water supplies with pesticides used to kill aquatic vegetation in Texas lakes and rivers. Non-chemical methods are available, like the mechanical harvester you arranged for LCRA to use on Lake Bastrop, which can both prevent this unnecessary water contamination and enhance fish habitat that is destroyed with the chemical approach.
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> When I experienced an asthma attack during, and observed many dead and sick animals after, the chemical treatment of Lake McQueeney in 1996, I contacted TNRCC for help. I was given the Agency "peanut butter - stump the citizen line," you can get cancer from peanut butter so why worry. It will be pretty dilute by the time you drink it anyway.
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> To date, TNRCC - the State Agency mandated to protect our drinking water - has not shown any sign of concern even though water providers and citizens feel strongly that this is a real and pressing problem. They told a Texas Parks and Wildlife Department and Guadalupe-Blanco River Authority sponsored Seminar on February 28 that TNRCC has granted waivers from drinking water testing requirements for aquatic herbicides.
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> In my opinion, TNRCC protects polluters and the people come second.
>
> Robin Richardson
> Health Awareness & Water Knowledge (H.A.W.K.)
> 728 Lake Placid Dr.
> Seguin, TX 78155

There were several other reports of illness experienced by people in the water the day the application was made. A possible explanation that came up in research for the court case of one badly injured citizen was that perhaps somewhere else on the lake a homeowner may have also made a legal application, resulting in dangerous levels of pesticide in the water. There was no testing of water quality to find out. Since Lake McQueeney, like most Texas public bodies of water, is part of a river system, the pesticide would have been far downstream by the time anyone thought to test for it. Ms Richardson's formal complaint, made to the Texas Department of Agriculture under FIFRA, could find no proof of illegal application. This is largely because FIFRA enforcement can only be related to label violations which could not be proven with the

information available to the citizens who observed and experienced ill effects. However, this experience did make it evident that the requirements for determining the volume of water present necessary to determine the proper application rate is very loosely followed, often using general estimates of the depth of the water, leading Ms. Richardson and others to wonder if it is even possible to properly follow the label directions for the application of aquatic herbicides. FIFRA cannot even begin to protect water quality.

TEXAS AQUATIC VEGETATION MANAGEMENT LAW

Following the Lake McQueeney and other aquatic herbicide use problems (all legal under FIFRA as far as we could figure out), concern about the lack of protection of drinking water supplies and the eco-system led the Texas Legislature to pass a bill designed minimize some of these problems. Texas now requires that no person may apply aquatic herbicide in a public body of surface water unless the herbicide is applied in a manner consistent with a state or local aquatic plant management plan adopted by the governing entity. This law has helped, but has not solved the problem.

PESTICIDES FOR THE USES STATED IN THIS DOCUMENT ARE NOT NECESSARY AND CAN AGGRAVATE THE PROBLEMS THAT THEY ARE INTENDED TO SOLVE. THEY SHOULD NOT BE EXEMPT FROM THE PUBLIC HEALTH AND WATER QUALITY PROTECTIONS OF CLEAN WATER ACT.

One of the basic problems with this proposed guidance is that it incorrectly assumes that the use of aquatic herbicides and insecticides and adult mosquito control pesticides are necessary. If the use of these substances is necessary, one assumes, we have to absorb some risk from it.

The use of pesticides (including herbicides) is only a band-aid approach to alleviate symptoms of an underlying problem whose cure is the only real way to stop the symptoms. For instance, aquatic vegetation problems occur largely because plants are supported by nutrients in the water. Most of the excess nutrients leading to excess aquatic plant growth are due to things people do like fertilize (which runs off into surface water), burn fossil fuels (creating nitrogen in the air which is deposited in surface water), and inadequate sewage treatment. It is the job of aquatic plants in the ecosystem to clean the water of these excess nutrients and add oxygen to the water. Mass killing with aquatic herbicides actually makes the problem worse by adding more nutrients to the water and depleting oxygen as the plants decay. Better to eliminate excess nutrients at their source and mechanically harvest and remove problem aquatic vegetation, letting the remaining vegetation do its water cleansing job. (A complicating factor here is the introduction of aggressive alien species like hydrilla which out-compete native vegetation. The waters where these species abound need special attention to physically remove them and restore less problematic native vegetation while reducing excess nutrients. This does not require the use of herbicides.

In another example, the use of insecticides for mosquito control is generally recognized to be the least effective method of control. Not only that, but most mosquito insecticides are broad spectrum agents of death that kill not only some of the mosquito population but also their natural predators who are often even more susceptible to the insecticides used. Mosquitoes are well known to reproduce rapidly, while the reproduction time of their predators is much slower, leaving mosquitoes with far fewer natural predators. The most effective way to control mosquitoes is to eliminate standing water (where mosquito larvae are concentrated during an

essential part of their life cycle) wherever possible, and to manage the remaining areas of standing water by introducing and encouraging natural mosquito predators like dragon flies, top feeding fish, frogs, bats, birds, damselflies, water strays, backswimmers and copepods. In our community we are encouraging people to create their own backyard water features to purposefully increase mosquito predators in order to control mosquitoes in their neighborhoods. If people are really serious about controlling serious mosquito problems, they would consider introducing sterile male mosquitoes as I understand has been successfully done in Israel.

While the spread of West Nile Virus is feeding the irrational and uneducated demand for adult mosquito spraying, it is well to note that the following study reports the obvious fact that over the long term, repetitive mosquito spraying has resulted in increased population of disease bearing mosquitoes (in this case in New York swamps, a 15 fold increase.)

> Howard JJ, Oliver. "Impact of naled (Dibrom 14) on the mosquito vectors of eastern equine encephalitis virus" Journal of the American Mosquito Control Association. December 1997. 13 (4):315-25.

CONCLUSION

In conclusion, FIFRA licenses the sale and use of pesticides (insecticides and herbicides) which are unnecessary and pollute our air, water, and soil. FIFRA does not protect our public waters. We need from EPA a clear statement that pesticides are subject to the Clean Water Act and that the use of aquatic insecticides, herbicides, algaecides, etc. introduced into public bodies of water is subject to NPDES permitting requirements. There is no jurisdictional dispute because the two laws have totally different purposes.